

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 June 2001 (07.06.2001)

PCT

(10) International Publication Number
WO 01/40765 A3

(51) International Patent Classification⁷: **G01N 15/14**

(21) International Application Number: **PCT/US00/42350**

(22) International Filing Date:
29 November 2000 (29.11.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/454,488 3 December 1999 (03.12.1999) US

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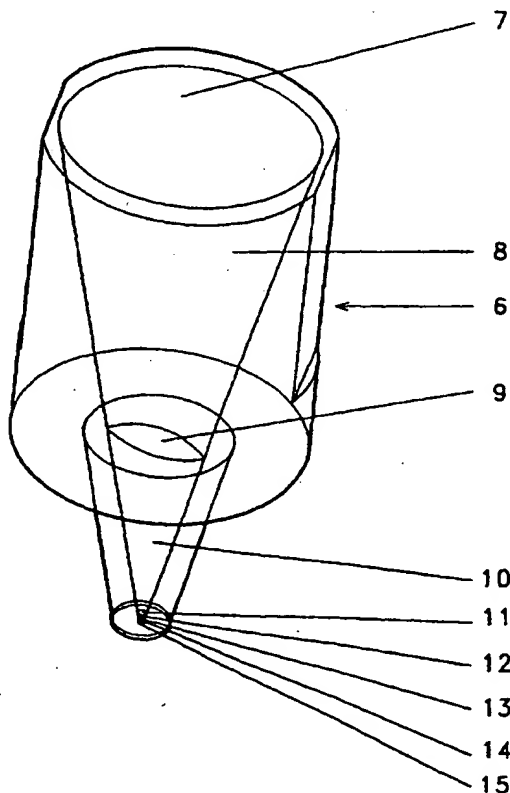
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(81) Designated States (national): AE, AG, AL, AM, AT, AT
(utility model), AU, AZ, BA, BB, BG, BR, BY, BZ, CA,
CH, CN, CR, CU, CZ, CZ (utility model), DE, DE (utility
model), DK, DK (utility model), DM, DZ, EE, EE (utility
model), ES, FI, FI (utility model), GB, GD, GE, GH, GM,
HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,
MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK
(utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ,
VN, YU, ZA, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian

[Continued on next page]

(54) Title: **IMPROVED FLOW CYTOMETER NOZZLE AND FLOW CYTOMETER SAMPLE HANDLING METHODS**



(57) Abstract: An improved nozzle system for a flow cytometer and accompanying methods have been invented for a high efficiency orientation and sorting process of a flat sample and dedicates items such as equine or bovine sperm cells. This improved nozzle system comprises a nozzle (16) with a novel interior surface geometry that can both gently accelerate the cells and can include an elliptical-like, single torsional interior surface element within (c) the nozzle, i.e., a single torsional orientation nozzle (6). The elliptical-like, single torsional interior surface element (e.g.) (8, 9, 10) may have a laminar flow surface and may produce the simplest flow path for applying minimal forces which act in either an accelerative nature or orienting hydrodynamic forces, namely, the single torsional orientation forces, to orient a flat sample (16) such as animal sperm cells into a proper direction for an analyzing and efficiently sorting process in clinical use, for research and for the animal insemination industry.

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patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
14 February 2002

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/42350

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01N15/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, INSPEC, COMPENDEX, SCISEARCH, PAJ, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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Date of the actual completion of the international search

28 September 2001

Date of mailing of the international search report

09/10/2001

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/42350

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
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